

† H.D. SANKALIA

## WATER AND IRRIGATION LAW AND MANAGEMENT IN ANCIENT INDIA

### *Scope of the subject*

Though the subject, as framed by the editors, is strictly confined to Ancient India it has been thought advisable to cover the entire background – prehistoric, protohistoric, and early historic, as we know at present.

Thus we begin with:

- i. The Palaeolithic
- ii. Neolithic – Chalcolithic, c. 7000 B.C. – 3000 B.C.
- iii. Copper – Bronze Age, c. 3000 B.C. – 700 B.C.
- iv. Iron Age, c. 700 B.C. – 400 B.C.
- v. Early Historic, c. 400 B.C. – 150 A.D.
- vi. Historic: c. 150 A.D. – 550 A.D.
- vii. Historic: c. 550 A.D. – 1250 A.D.

### *Palaeolithic*

During the long Palaeolithic period spread over lacs of years (c. 30,00,000 – 1,00,000) man was a hunter-gatherer. He is supposed to have lived in small groups in caves, rock-shelters (such as Bhimbetka, near Bhopal in Madhya Pradesh), or on the river banks. Though there

might have been fights between groups for the use or possession of a water-hole, particularly in areas where water was scarce, still except mutual understanding between these groups, we cannot expect anything else.

### *Neolithic-Chalcolithic*

There is evidence now that first barley and then wheat, both of an early variety were grown in the Indus valley in Baluchistan from 6000 B.C. and slightly later. There are also traces of regular habitations and pottery <sup>1</sup>. The Indus is known to be a perennial flowing river, and water is or should have been available throughout the year. Hence there would be no need of sharing the water, and particularly so where the population was small.

This early habitation grew-up into an extensive civilization, encompassing the whole of Sind, Baluchistan, the Punjab, Kutch, most of Saurashtra and even the coastal districts of Broach and Surat, and Dhulia and Ahmadnagar in Maharashtra. In all this vast area though the habitations (village or towns) are found only on the rivers like the Godavari and the Tapi, which though perennial do suffer occasionally from the scarcity of water. Hence the need might have been felt occasionally for sharing the water (as last season 1983-84 at Nevasa on the Pravara).

At Inamgaon, on the Bhima, District Ahmadnagar, a channel was dug out in the solid rock, probably during the late Chalcolithic period (c. 700 B.C.) to irrigate the fields. And some rules must have been framed by the then rulers, or the inhabitants for sharing the channel water.

However, it is in the north – the Punjab, Uttar Pradesh, and Bihar-Bengal, where arose the first empire under Chandragupta Maurya that a regular code was formulated by Kauṭilya in his *Arthaśāstra*. This was the result, no doubt, of the practices which

---

1. See Jarrige, Jean François, "Chronology of the earlier periods of the greater Indus as seen from Mehrgarh, Pakistan", and Constantini, Lorenzo, "The beginning of agriculture in the Kachi Plain: the evidence from Mehrgarh" in *South Asian Archaeology*, 1981, pp. 21-32, Ed. by Bridget Allchin, University of Cambridge, 1984.

must have gradually come into existence for the use of water for irrigation and agriculture, or as Ghoshal puts it, "The Indo-Aryan polity in the early Vedic period was sufficiently organised to make it possible for the king to collect regular taxes (usually called *bali*) from the subjects. The taxes apparently consisted of contributions of agricultural produce and of the flock of cattle paid by the villages on certain specific rates."<sup>2</sup>

Likewise tributes from the conquered was another, but not a regular source.

Though some form of organization was undoubtedly in existence, but its specific character is not known.

### *Water, irrigation and taxation*

The supply of water and irrigation formed an important part of taxation in the past, as they do now. For the taxes realized in cash or in the form of grain were the main sources of filling up the treasury (*Kośa*). According to the *Arthaśāstra* as well as all the *smṛitis*, *Kośa* was the real king.

Hence the methods of taxation have been discussed by the *Mahābhārata*, *Arthaśāstra* as well as all the *Smṛitis*.

The broad principle underlying taxation was that a king or the ruler protects the people or his subjects from natural calamities as well as wars etc. And in return the people have to help the king for doing so.

Hence the authorities first mention the methods of taxation.

Kauṭilya justifies the grant of advances and remissions to cultivator on a sparing scale (K.II,1).

The taxes should be taken little by little like a bee (K.V.2).

This principle is also endorsed by the Buddhist work *Divyāvadāna* and *Śukranīti* (IV. 2.18; 113)<sup>3</sup>.

2. Ghoshal, U.N., *Contribution to the History of the Hindu Revenue System*, Calcutta, 1929, pp. I-X.

3. Ghoshal, *Hindu Revenue System*, p. 20 ff. The original authorities cited by Ghoshal are here given within brackets in the text.

Not only it was a cardinal principle that the king should stock grain for the future, but one of the earliest inscriptions from Bihar (c. 400 B.C.), mentions that every citizen should put some grain in the State granary – a huge pit with holes on the periphery for protection with a roof<sup>4</sup>.

One of the chief sources of State revenue are irrigation works - wells, rivers, dams (*Sītā*). Among the most systematic account of the heads of state revenue given by *Kauṭilya Arthaśāstra*, II, 3. Among these irrigation works consist of five or six items.

According to *Śukranīti*, II.321, land revenue includes revenue from (i) religious foundations (ii) artificial water-supply. The *Arthaśāstra* mentions the following branches of land revenue.

### *Branches of Land Revenue*

(i) *Sītā*: – This is defined as comprising all kinds of crops that are brought by the Superintendent of Agriculture. (*Kauṭilya*, II.15).

The exact significance of this term or what it comprised has been discussed in detail by Ghoshal<sup>5</sup>, he concludes that *Sītā* refers to the cultivation of State Farms.

- a) ploughed and sown by the King's employees and means,
- b) fields left unsown, for want of seeds and agricultural labour, and hence let out to tenant and in return got 1/4 or 1/5 of the crop.
- c) Irrigated lands situated within the bounds of the royal farms, to be let out to the tenants on condition of payment of varying water-rates.
- d) Irrigated lands, as above situated, to be cultivated directly under the supervision of the King's steward.

### *Bhāga*

While *Sītā* constituted the collective out-put of the royal farms, the *bhāga* was the king's customary share of the produce levied on the ordinary revenue-paying fields.

---

4. Cf. *Indian Antiquary*.

5. Ghoshal, *op. cit.*, p. 34.

This according to Kauṭilya, constituted 1/6 of the grain-share. Even the hermits living in the forest paid from their gleanings at the specific rate, as mentioned by Kālidāsa in the *Śakuntala* <sup>6</sup>.

Further un-husked grain was assessed at 1/3 or 1/4 of the crop on rich soils which are independent of rain-water, while soil of intermediate and inferior qualities paid lower rates.

In brief 'according to Kauṭilya' King's grain-share depended upon the fertility of the soil.

Besides these normal taxes on agriculture land, there were contributions in cash paid to the King for certain special kinds of crops <sup>7</sup>.

Then there was revenue from village pastures (*vivita*), according to the *Arthaśāstra* II.34 <sup>8</sup>.

As opposed to these, the *Arthaśāstra* mentions instances where the tax was not to be paid, because it was held by Brāhmaṇas, or State officers for pious purposes <sup>9</sup>.

In the *Smṛitis*, Epics and Purāṇas, the details regarding the methods of collecting revenue are neither full nor well arranged as in the *Arthaśāstra* <sup>10</sup>.

According to the *Arthaśāstra*, there were two main sources or taxes – *Bhāga* and *Bali*, the former meaning the King's grain-share and the latter some kind of additional cess. However, the *Smṛitis* ignore the *bhāga* in the technical sense and apply the term *bali* to mean the King's grain-share <sup>11</sup>.

However, works like the *Gautama Dharma Sutra* mention three distinct rates viz. 1/6, 1/8, 1/10 apparently with respect to good, intermediate and bad soils <sup>12</sup>. *Manu Smṛiti* mentions three rates 1/6, 1/8, 1/12 for crops. The *Agni Purāṇa* has two distinct rates, 1/6 and 1/8 for many kinds of paddy crops.

6. Ghoshal, *op. cit.*, p. 35.

7. *Ibid.*, p. 39.

8. *Ibid.*, p. 41.

9. *Ibid.*, p. 43.

10. *Ibid.*, p. 57.

11. *Ibid.*, p. 58.

12. *Ibid.*

All this implies a more advanced principle of assessment. *Vas.* (XIX, 26-27) recommends exemption of the use of river, dry grass, forests etc. Here the rivers are perhaps mentioned for irrigation or fisheries <sup>13</sup>.

*Manu.* and *Visnu.* give further details of taxes on meat, honey etc. <sup>14</sup>. There was an indirect tax on the use of water. Thus according to *Vas.* XIX, 26-27 "The use of rivers, etc. should be exempt from taxation, or in the alternation those who depend upon them for their livelihood should pay something to the King <sup>15</sup>. According to Ghoshal <sup>16</sup>, the use of rivers, refers to irrigation or fisheries.

In the later *Smṛitis*, for instance, these and other sources of revenue are all included in the body of the King's income. *Manu.* has almost the same list (VII, 130-32).

There was a tax on *Setu* (Embanked reservoirs). This is included by the *Smṛitis* under the heading of Boundary Disputes <sup>17</sup>. Thus according to *Yaj.* (II,161) when a person erects a *setu* in another's land without informing the owner thereof the latter enjoys the advantage of its erection and in his absence the King <sup>18</sup>. This is further clarified by a rule in *Nārada.* (XI.20-21) <sup>19</sup>.

This means that in the case of embanked reservoirs where the ownership was lost, the King was regarded as the rightful owner.

Surprisingly Kauṭilya had interpreted this rule or situation more liberally. For, according to the *Arthaśāstra* (III.9) the restorer of decayed or neglected lakes or reservoirs was entitled to remission of taxes for four years and the full right of sale and mortgage <sup>20</sup>.

In the later work on Polity, called the *Śukranīti* (IV, 2.120 ff), the following rates of the grain-share are mentioned:

1. Lands depending upon rivers (river-irrigated lands).
2. Lands depending upon tank and wells (tank-irrigated lands).
3. Lands depending upon rain-water (unirrigated lands).

---

13. Ghoshal, *op. cit.*, p. 59.

14. *Ibid.*

15. *Ibid.*

16. *Ibid.*

17. *Ibid.*, p. 63.

18. *Ibid.*

19. *Ibid.*

20. *Ibid.*, p. 64.

The King was entitled to 1/3 of the net produce <sup>21</sup>.

The methods of land-revenue assessment and collection in the *Śukranīti* are explained by other texts <sup>22</sup>.

The king should assess the land-revenue (*bhāga*) after ensuring that the lands are classified according to their fertility and measured according to their extent. Ghoshal understands by this, "a system of land measurement according to the standard measure and of classification of soils forming the basis of the revenue assessment".

Ghoshal further interprets this rule as the introduction of middlemen <sup>23</sup>.

In brief, the *Śukranīti* follows the general trend of agricultural policy, laid down in the Hindu technical literature on polity. It advocates, for instance, remissions of the land revenue for improvements and reclamations. No tax (*bhāga*) should be assessed upon persons who improve the lands by the construction of tanks, artificial water-courses etc. as well as those who bring fresh land under cultivation, until they have earned twice their outlay <sup>24</sup>.

---

21. Ghoshal, *op. cit.*, p. 66.

22. *Ibid.*, p. 67.

23. *Ibid.*

24. *Ibid.*